THE SOUTH CAROLINA ESTUARINE AND COASTAL ASSESSMENT PROGRAM (SCECAP)

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David Chestnut is a Senior Scientist in the Bureau of Water of the South Carolina Department of Health and Environmental Control. He is responsible for the design and oversight of the SCDHEC Ambient Surface Water Quality Monitoring Program and the assessment of water quality data for the SCDHEC Watershed Water Quality Assessments as well as the §305(b) report to congress and the §303(d) list of impaired waters. Mr. Chestnut has been involved with the monitoring and assessment of South Carolina's water quality for over 17 years.

Robert Van Dolah is Acting Director of the Marine Resources Research Institute of the South Carolina Department of Natural Resources. He also coordinates the Marine Resources Division's Environmental Research Program and is the Project Leader for the USEPA-funded National Coastal Assessment (Coastal 2000) program in South Carolina, which has been integrated with SCECAP. Dr. Van Dolah has more than 25 years experience in environmental research dealing with various issues related to anthropogenic stresses in coastal environments.

Abstract

In 1999, the S.C. Department of Natural Resources (SCDNR) and the S.C. Department of Health and Environmental Control (SCDHEC) initiated a major new collaborative monitoring program entitled the South Carolina Estuarine and Coastal Assessment Program (SCECAP). The program's objective is to assess the condition of the state's estuarine habitats and associated biological resources annually. The program integrates multiple measures of water quality, sediment quality and biological condition to assess overall ecological condition, and it expands historical monitoring activities that have primarily focused on open water habitats (e.g. tidal rivers, sounds) to include tidal creeks, which represent important nursery habitat for most of the state's economically valuable species. Many tidal creeks are the first point of entry for nonpoint source runoff from upland areas, providing an early indication of anthropogenic stresses on the environment. The SCECAP monitoring design uses a probability-based approach developed by the USEPA National Health and Environmental Effects Research Laboratory in Corvallis, OR. It also incorporates measurements and samples required for the USEPA National Coastal Assessment Program, which was initiated in South Carolina in 2000. This USEPA program provides an opportunity to integrate state monitoring goals with national monitoring objectives, while allowing an expansion of monitoring activities that would otherwise not be feasible through state funding alone. Other research projects and partners have also been incorporated into SCECAP, providing more funding and opportunities for collaboration. Cooperators include the U.S. Fish and Wildlife Service (USFWS), NOAA/NOS-Charleston Lab, the College of Charleston, the Harmful Algal Bloom Program and several coastal counties that provided funding for water quality monitoring instrumentation. The first two years of sampling have provided very useful data on the typical conditions found in both creeks and open water habitats, and the proportion of each habitat that meets or exceeds "normal" conditions. Additionally, the data have demonstrated that many of the water quality and biological condition measures in tidal creeks are very different from those in larger open water bodies.